

Application No.: 10/775785
Docket No.: EL0479USNA

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Amendments to Claims

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(Currently amended) An ink jet printable composition comprising

(a) materials selected from the group consisting of conductive material; materials, dielectric materials and resistive materials;

(b) polyvinylpyrrolidone homopolymer, polyvinylpyrrolidone copolymer or mixtures thereof; dispersed in

(c) dispersion vehicle selected from organic solvent, water, or mixtures thereof;

wherein the viscosity of said composition is between 5 mPa.s to 50 mPa.s at a temperature of 25 to 35°C and wherein the conductive material has ~~a particle size of greater than 0.1 to 1.2 microns~~ an average particle size (D50) of 0.1 to 1.2 microns.

2. (Original) The composition of Claim 1 further comprising up to 10 wt.% inorganic resinate as binder precursor.

3. (Original) The composition of Claim 2 wherein said inorganic resinate is silver resinate or a mixture of metal resinates.

4. (Cancelled)

5. (Previously amended) The composition of Claim 1 wherein said ~~organic~~ polymer of 1(b) is further comprised of other polymers selected from the group consisting of polymethacrylates and polyacrylates.

6. (Original) The composition of Claim 1 further comprising a monomer wherein said monomer is ultraviolet curable or thermally curable.

7. (Previously submitted) The composition of Claim 6 wherein said monomer is selected from the group consisting of triethylolpropane ethoxy triacrylate, trimethylolpropane triacrylate, pentaerythritol triacrylate, pentaerythritol trimethacrylate, trimethylolpropane trimethacrylate, pentaerythritol tetraacrylate, pentaerythritol tetramethacrylate, triethylene glycol diacrylate, triethylene glycol dimethacrylate, polyoxyethylated trimethylolpropane triacrylate, ethylated pentaerythritol triacrylate, dipentaerythritol monohydroxypentaacrylate and 1,10-decanediol dimethacrylate.

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8. (Previously submitted) The composition of Claim 1 wherein said conductive material is present in the range of 1-60 wt.%, based on total composition.
9. (Currently amended) The composition of Claim 1 wherein said organic polymer of (b) is present in the range of 1-10 wt.%, based on total composition.
10. (Original) The composition of Claim 1 wherein said dispersion vehicle is present in the range of 40-95 wt.%, based on total composition.
11. (Original) The composition of Claim 6 further comprising a photoinitiator.
12. (Previously submitted) The composition of any one of Claims 1-7 wherein said organic solvent is selected from the group consisting of aliphatic alcohols, esters of aliphatic alcohols, terpenes, ethylene glycol, esters of ethylene glycol, carbitol esters and mixtures thereof.
13. (Previously submitted) The composition of Claim 1 wherein said conductive material is coated with a fatty acid surfactant selected from the group consisting of stearic acid, palmitic acid, a salt of stearate, a salt of palmitate and mixtures thereof.
14. (Original) An application package which comprises a cartridge and the composition of Claim 1 wherein said cartridge is suitable to disperse said composition in an ink jet system.
45. (Currently Amended) The composition of Claim 1 wherein the composition exhibits stability for up to 24 hours and is suitable for inkjetting ~~may be inkjetted without further agitation.~~
16. (NEW) The composition of Claim 1 wherein the percent of conductive material in the composition is from 15 wt% to 60 wt%.

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17. (Currently amended) The use of the composition of Claim 1 wherein said composition is applied to a substrate selected from the group consisting of glass, ceramic and plastic.

18. (Currently amended) The use of the composition of Claim 1 where said composition is applied in a process of one pass printing as a (dried) line width in the range of 100-165 microns with a line thickness in the range of 1.2-2.0 microns, upon one-pass printing.

19. (New) The composition of claim 1 wherein said materials are conductive materials selected from the group consisting of gold, silver, copper, nickel, aluminum, platinum, palladium, molybdenum, tungsten, tantalum, tin, indium, lanthanum, gadolinium, ruthenium, cobalt, titanium, yttrium, europium, gallium, zinc, magnesium, barium, cerium, strontium, lead, antimony, and combinations thereof.

20. (New) The composition of claim 1 wherein said materials are silver conductive materials.